FORMULA OF THE INVENTION

1. The method of stereoscopic image points measuring, consisting in the construction of the stereoscopic model set by the pair of overlapping images, determination of the position of the aiming axis of the eyes during stereoscopic perception of that model and recording the observation data at the moments of the current eyes fixation, which differs by the computing the projection of the area of the sight fixation on the monitor screen with the observed objects, for each eye, and selecting the typical points of the object being observed.

2. Method of the p.1, which differs by the following: the typical points with the same name of the observed object, selected on the fragments of the digital stereo-images, corresponding with sight fixation areas, must be identified for the left and right eye by time synchronization.

3. Method of any of p.1-2, which differs by the following: the typical points of the same name of the observed object, selected on the fragments of the digital stereo-images, corresponding with the eye fixation areas, are identified for the left and right eye, taking into consideration the intersection of the corresponding rays, determined by the vectors coplanarity equation.

4. Method of any of p.1-3, which differs by the following: before starting the observation the system calibration has to be done by observation the image with test-objects, with the known position data in the system of position data of the main monitor, comparing the position data of the pupils of the eyes centers, determined in the system of the position data of the camera, with the position data of the position data of the test object pictured on the main monitor and the following selection of the mathematic dependencies, describing mutual transformations of the position data.

5. Method of p.4, which differs by the following: during the system calibration test objects are presented for the observation with the different conditions, such as time, duration and order of appearance of the test objects, location, size, shape and color of the test objects, surrounding background, static or dynamic regime of test objects appearance.

6. Method of any of the pp.1-3, which differs by the following: additionally, during the observation time the visual control of the measuring is done on the screen of the main monitor by imprinting the color markers into the area of image, corresponding to said fixations.

7. Method of p.6, which differs by the following: the visual control of the measuring is done on the screen of the main monitor by modifying the color parameters of the area of the observed image, corresponding to said fixations.

8. Method of any of the pp 1-7, which differs by the following: the compensation of the observer's head movements is tracked by calculation of the movement in the position of the aiming axis of both eyes by the images of separate parts of the observer's head.

9. Method of p.8 which differs by the following: the compensation of the observer's head movements is done by tracking the movements of several marks fixed on the observer's head.

10. Method of p.9 which differs by the following: the observer's head movements is tracked by the marks, fixed close to the observer's eyes to make the images of those marks to get captured by the video-cameras, tracking the observer's eyes movements.

11. Method of p.10 which differs by the following: marks for tracking the observer's head movements, are specifically shaped, which allows detecting the location and orientation of the mark, and, accordingly, the observer's head movements.

12. Method of p.8 which differs by the following: the parameters of the head movements are detected on two different planes.

13. Method of any of pp.1-12, which differs by the following: the position of the pupil of the eye during the eyes movements registering has to be determined in the three-dimensional space by receiving two images of each eye by two synchronized video-cameras, fixed with different foreshortening.

14. The device for the stereoscopic measuring of the position data of the image points, consisting of two video-cameras for tracking the eyes movements, video-camera for tracking the head movements, system for video-capture of the image by personal computer, monitor for displaying the image, system of stereo-observation, allowing to observe stereoscopic images, which differs by containing a construction made in a shape of eyeglasses with the specially shaped marks, for example, made in ellipsoidal shape, which of those are located in the vertical plane in a way to make the images of the marks possible for capturing by the cameras, tracking the eyes movements.

15. Device of p.14 which differs by the following: the eyeglasses frame has the specifically shaped marks, for example, made in ellipsoidal shape, which are located on the horizontal plane, and the mirror fixed above the observer's head is installed additionally into the Device; and the surveillance video-camera for tracking the head movements is fixed in a special way to capture at the same time the part of the head and the reflection in the eyeglasses frame mirror with the marks placed on it horizontally.

16. The Device of any of pp.14-15, which differs by the following: in addition to the main two video cameras for tracking the movements of each eye separately, there are two additional video cameras installed in to track the movements of each eye synchronically by the main and additional video-camera from two points.

17. The device of any of p.p.14-18, which differs by containing an additional monitor to control visually the process of observation and to operate the process of observation.

18. The device of any of pp.14-17, which differs by the following: video-cameras have a system of infrared highlighting the eyes area.

19. The device of any of pp.14-18, which differs by the following: the video cameras have the infrared color filters to cut off the parasite highlighting in the visible range of spectrum.